

Appl. No. 09/995,319
Amdt. Dated November 9, 2005
Reply to Office Action of August 9, 2005

Attorney Docket No. 81784.0246
Customer No. 26021

Listing of Claims:

1. (Previously Presented): A charge transfer device having a source follower amplification circuit,

wherein the source follower amplification circuit comprises:

an amplification transistor which receives, at a gate, a voltage signal from an output section and outputs, from a source, an output signal corresponding to a change in the voltage signal;

a load transistor connected between the amplification transistor and a first power source for causing a constant current to flow from the amplification transistor to the side of the first power source;

a control transistor connected between the amplification transistor and a second power source, wherein the control transistor controls a current flowing from the second power source to the amplification transistor according to a control signal; and

an output control circuit, connected to a gate of the control transistor, for outputting the control signal for reducing a current flowing from the second power source to the amplification transistor during a period in which a pixel signal is not read.

2. (Previously Presented): The charge transfer device according to claim 1, further comprising an input terminal which is commonly connected to a gate of the control transistor and to a gate of the load transistor.

3. (Previously Presented): The charge transfer device according to claim 2, further comprising a control signal generating circuit provided between the gate of the control transistor and the input terminal for generating the control signal

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based on an input signal externally input to the input terminal, and the load transistor maintains an on state with regard to the input signal.

4. (Previously Presented): The charge transfer device according to claim 1, wherein the control transistor is of an enhancement type.

5. (Previously Presented): The charge transfer device according to claim 4, further comprising an input terminal which is commonly connected to a gate of the control transistor and to a gate of the load transistor.

6. (Previously Presented): The charge transfer device according to claim 5, further comprising a control signal generating circuit provided between the gate of the control transistor and the input terminal for generating the control signal based on an input signal externally input to the input terminal, and the load transistor maintains an on state with regard to the input signal.

7. (Previously Presented): A charge transfer device having a source follower amplification circuit, wherein said source follower amplification circuit comprises:

means for receiving at a gate, a voltage signal from an output section and outputting, from a source, an output signal corresponding to a change in the voltage signal;

means for causing a constant current to flow from the means for receiving and outputting, to a side of a first power source connected between the means for receiving and outputting and the first power source;

means for controlling a current flowing from a second power source of the means for receiving and outputting according to a control signal connected between the means for receiving and outputting and the second power source; and

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output control means, connected to the means for controlling a current, for outputting the control signal for reducing a current flowing from the second power source to the means for receiving and outputting during a period in which a pixel signal is not read.

8. (Previously Presented): The charge transfer device according to claim 7, further comprising an input terminal which is commonly connected to a gate of the means for controlling a current and to a gate of the means for causing a constant current.

9. (Previously Presented): The charge transfer device according to claim 8, further comprising means for generating the control signal based on an input signal externally input to the input terminal, and the means for causing a constant current maintains an on state with regard to the input signal, the means for generating the control signal is provided between the gate of the means for controlling a current and the input terminal.

10. (Previously Presented): The charge transfer device according to claim 7, wherein the means for controlling a current is of an enhancement type.

11. (Previously Presented): The charge transfer device according to claim 10, further comprising an input terminal which is commonly connected to a gate of the means for controlling a current and to a gate of the means for causing a constant current.

12. (Previously Presented): The charge transfer device according to claim 11, further comprising means for generating the control signal based on an input signal externally input to the input terminal, and the means for causing a constant current maintains an on state with regard to the input signal, the means for

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generating the control signal is provided between the gate of the means for controlling a current and the input terminal.

13-15. (Cancelled).

16. (Previously Presented): The charge transfer device according to claim 7, wherein the output control means, outputs the control signal for reducing a current flowing from the second power source to the means for receiving and outputting, while imaging is performed.

17. (Previously Presented): The charge transfer device according to claim 7, wherein the output control means, outputs the control signal for reducing a current flowing from the second power source to the means for receiving and outputting, according to image quality.

18. (Previously Presented): The charge transfer device according to claim 1, wherein the period in which a pixel signal is not read includes at least one of a horizontal blanking period and a vertical blanking period.

19. (Previously Presented): A charge transfer device having a source follower amplification circuit,

wherein the source follower amplification circuit comprises:

an amplification transistor which receives, at a gate, a voltage signal from an output section and outputs, from a source, an output signal corresponding to a change in the voltage signal;

a load transistor connected between the amplification transistor and a first power source for causing a constant current to flow from the amplification transistor to the side of the first power source;

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a control transistor connected between the amplification transistor for controlling a current flowing from the second power source to the amplification transistor according to a control signal; and

an output control circuit connected to the gate of the control transistor, for outputting the control signal for reducing a current flowing from the second power source to the amplification transistor while imaging is performed.

20. (Previously Presented): A charge transfer device having a source follower amplification circuit,

wherein the source follower amplification circuit comprises:

an amplification transistor which receives, at a gate, a voltage signal from an output section and outputs, from a source, an output signal corresponding to a change in the voltage signal;

a load transistor connected between the amplification transistor and a first power source for causing a constant current to flow from the amplification transistor to the side of the first power source;

a control transistor connected between the amplification transistor for controlling a current flowing from the second power source to the amplification transistor according to a control signal; and

an output control circuit, connected to the gate of the control transistor, for outputting a control signal for reducing a current flowing from the second power source to the amplification transistor, according to image quality.